

Generation IV Initiative

Presentation at ANS Panel on the
DOE Generation IV Technology Roadmap”



Milwaukee, June 19, 2001

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Generation IV Systems

 **Nuclear energy systems deployable by 2030**


 **Systems offering significant advances in**

 sustainability

 safety and reliability

 economics

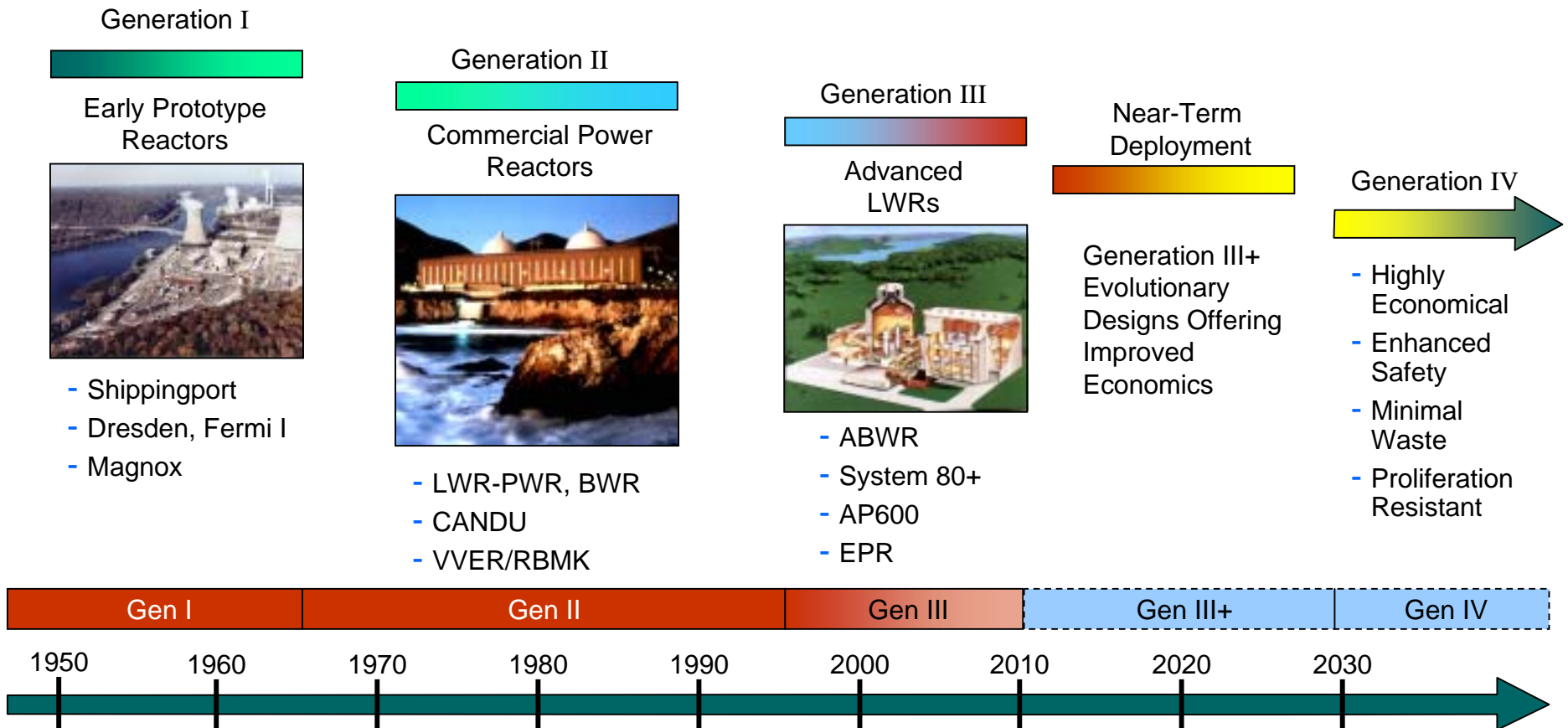
 **Systems include fuel cycle and power conversion**

 **Diversity of applications (electricity, H₂, water, heat)**

 **Deployable in a wide range of markets**



The Evolution of Nuclear Power





Nuclear Energy Research Advisory Committee (NERAC)

- **Subcommittee on Generation IV Technology Planning**

- Established in October 2000
to provide guidance on development
of the Generation IV Technology
Roadmap

- Membership from U. S.
Industry, laboratories,
and academia


- Co-chaired by
Neil Todreas, MIT and
Sal Levy, GE (retired)






Nuclear Energy Research Advisory Committee (NERAC)

Subcommittee Charter: Gen IV Technology Roadmap

 Establish goals that define the requirements for Generation IV nuclear energy plants

 Suggest paths forward to resolve technical and institutional issues for Near-Term Deployment (by 2010)

 Recommend Gen IV R&D Plan

 Sequencing of R&D task and initial cost estimates

 National and international collaboration

 Systems must be deployable by 2030











Generation IV International Forum



 **Facilitate research planning and international cooperation between countries interested in the future of Nuclear Energy**

 **Led by Policy Committee, composed of senior nuclear technology official representing member governments**

 **Observers from:**


-  International Atomic Energy Agency
-  OECD/Nuclear Energy Agency
-  European Commission
-  U.S. Nuclear Regulatory Commission
-  U.S. Department of State

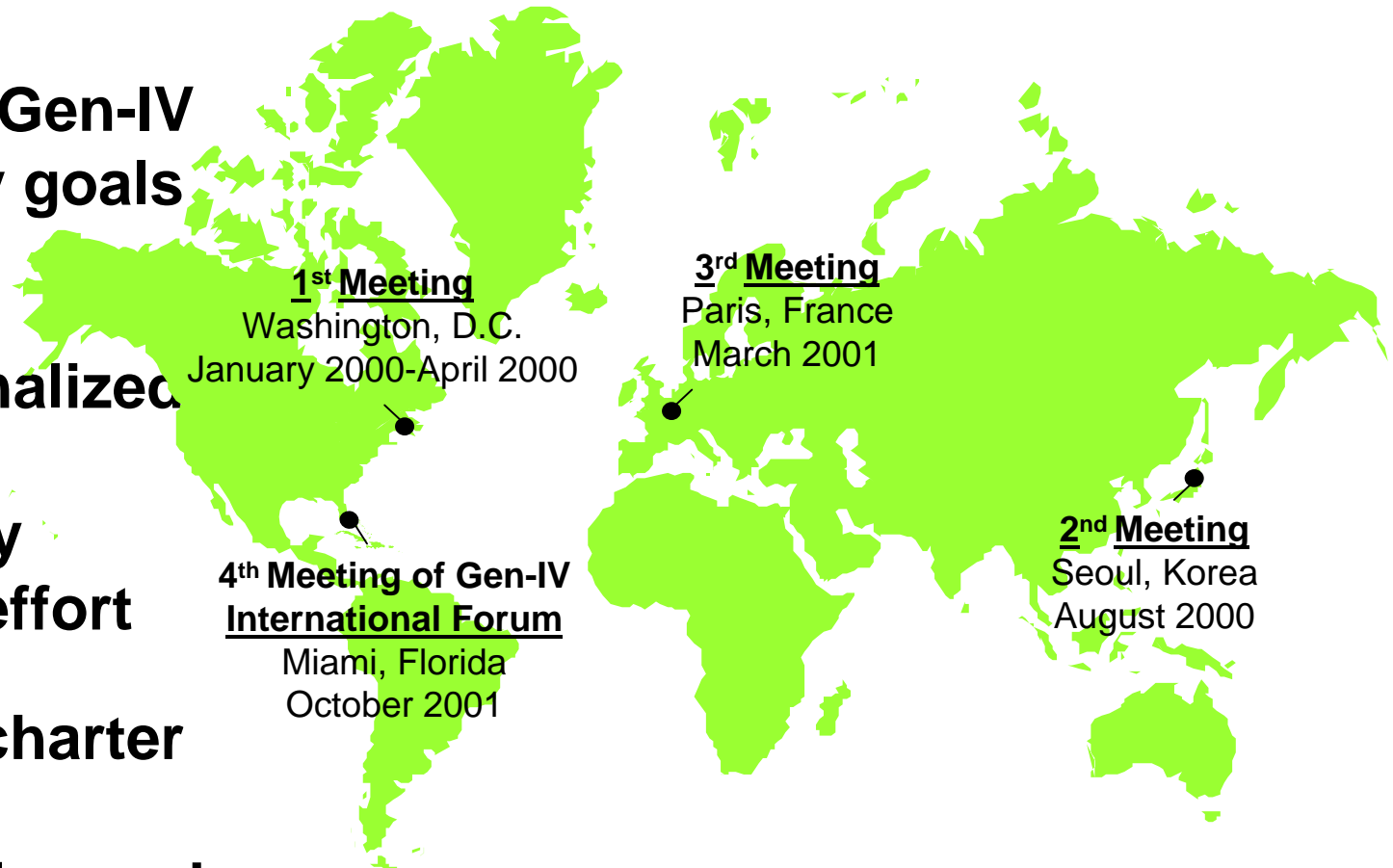


Generation IV International Forum

 **Endorsed Gen-IV technology goals**

 **Internationalized the Gen-IV Technology Roadmap effort**

 **Finalized charter governing memberships and objectives**





Generation IV Initiative

Near-term Objectives

- ✎ Establish Near-term Deployment Working Group
- ✎ Identify institutional and regulatory barriers to new plant deployment in the U.S.
- ✎ Provide recommendations on appropriate government actions to assist in addressing barriers (complete by September 2001)

Long-term Objectives

- ✎ Establish Gen-IV Technology Project
- ✎ Identify and evaluate most promising nuclear energy system concepts
- ✎ Provide comprehensive R&D plan to support future commercialization of the best concepts (complete by September 2002)